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DASHEEN MOSAIC VIRUS OF FOLIAGE AROIDS

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Aroids (Family: Araceae) comprise a significant proportion of the foliage industry of Florida. Among the most important are Aglaonema, Caladium, Dieffenbachia, Philodendron, Scindapsus, and Syngonium. Other aroids of commercial importance in Florida are Cryptocoryne raised as an aquarium plant and malanga (Xanthosoma sp.) grown for food, especially by the Cuban populace. Dasheen mosaic virus was discovered in Florida in 1969 (6). Since then it has been found throughout Florida causing serious losses in commercial plantings of Dieffenbachia (especially D. amoena and D. picta 'Exotica' and 'Perfection') and other aroids (3,4).

HOST RANGE. Dasheen mosaic virus appears to infect members of the Araceae only. Within this family it has a wide host range encompassing species in at least 12 genera: Aglaonema, Amorphophallus, Anthurium, Arisaema, Caladium, Colocasia, Cryptocoryne, Dieffenbachia, Philodendron, Spathiphyllum, Xanthosoma, and Zantedeschia (3,6). Some aroids such as Scindapsus and Syngonium do not appear to be affected by this virus.

SYMPTOMS. Like most viruses, dasheen mosaic disfigures and stunts infected plants, but rarely kills them. Symptoms vary considerably according to season, growth conditions, and the aroid species infected. A mosaic pattern is the most characteristic symptom. A deformation of the plant part, disruption of its symmetry, and, in the case of variegated aroids, impairment of normal foliar color patterns may occur also (fig. 1). Some infected plants do not have obvious symptoms; nevertheless, these plants will grow at a reduced rate compared to their virus-free counterparts.

CONTROL. Dasheen mosaic virus can be transmitted to healthy plants either by aphids or by vegetative propagation (6). Consequently, it is advisable to maintain a good insect control program and to exercise appropriate sanitation measures. Once a plant becomes infected it remains infected throughout its life. Heat treatments have not been successful in eliminating dasheen mosaic virus from infected plants (1). However, healthy plants can be obtained through seed propagation since this virus apparently is not seed-borne (5). Another means of eliminating this virus from infected plants is through tissue culture (2). This technique is still under experimentation at the University of Florida, but prospects are good for its adaptation on a practical scale in the near future.

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Fig. 1. Dieffenbachia picta infected with dasheen mosaic virus: A) healthy leaf; B) infected leaf showing malformation, mosaic pattern, and reduced size. Both leaves are of the same age.

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